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## Amendments to the Claims:

Pursuant to 37 C.F.R. §1.121(c), this listing of claims will replace all prior versions, and listings, of claims in the application:

## Listing of Claims:

- 1. (Original) A method for determining whether a peptide forms a phosphorus-based ester with an organophosphorus agent comprising the steps of:
  - (a) contacting the peptide with the agent under conditions permitting formation of a phosphorusbased ester; and
  - (b) determining whether a phosphorus-based ester has formed between the peptide and the agent.
- 2. (Previously Presented) A method of claim 1 for determining whether, among a plurality of peptides, there exist a peptide that forms a phosphorus-based ester with an organophosphorus agent comprising the steps of:
  - (a) contacting the plurality of peptides with the agent under conditions permitting formation of a phosphorus-based ester; and
  - (b) determining whether a phosphorus-based ester has formed between any of the peptides and the agent, the formation of such an ester indicating that there exists a peptide that forms a phosphorusbased ester with the agent.
- (Previously Presented) method of claim 2 for Α 3. peptide, characterizing a among identifying and that forms a phosphorus-based plurality of peptides, ester with an organophosphorus agent comprising the steps of:
  - (a) contacting the agent with the plurality of peptides under conditions permitting formation of a phosphorus-based ester;

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(b) identifying a peptide among the plurality of peptides that forms a phosphorus-based ester with the agent; and

- (c) determining the amino acid sequence of the peptide so identifying in step (b), thereby identifying and characterizing the peptide that forms a phosphorus-based ester has with the agent.
- 4. (Previously Presented) The method of claim 1, wherein the phosphorus-based ester is a phosphate ester.
- 5. (Currently Amended) The method of claim 1, wherein the phosphorus-based ester is a phosphonate ester.
- 6. (Previously Presented) The method of claim 1, wherein the phosphorus-based ester is a phosphinate ester.
- 7. (Previously Presented) The method of claim 1, wherein the peptides are bound to a solid support.
- 8. (Original) The method of claim 7, wherein the solid support comprises a bead, a microtiter plate, a glass chip or a silicone chip.
- 9. (Previously Presented) The method of claim 1, wherein the agent is selected from the group consisting of malathion, parathion, paraoxon, schradan, dichlorfenthion, soman, sarin, VX, GB and tabun.
- 10. (Original) The method of claim 9, wherein the agent is labeled with a detectable marker.
- 11. (Original) The method of claim 10, wherein the detectable marker is a radioisotope, a fluorescent molecule, biotin or an enzyme.
- 12. (Original) The method of claim 11, wherein the agent is a nerve agent and the detectable marker is rhodamine.

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- 13. (Original) The method of claim 12, wherein the agent has the structure set forth as analog 1 in Figure 2.
- 14. (Original) A peptide which forms a phosphorus-based ester with an organophosphorus agent, which peptide comprises a nucleophilic functional group.
- 15. (Cancelled)
- 16. (Original) The peptide of claim 14, wherein the length of the peptide is between six and 15 amino acid residues.
- 17. (Original) The peptide of claim 16, wherein the peptide has a length of six amino acid residues.
- 18. (Original) The peptide of claim 14, wherein the molecular weight of the peptide is less than 1500 daltons.
- 19. (Original) The peptide of claim 14, wherein the agent is an organophosphorus insecticide or chemical warfare agent.
- 20. (Cancelled)
- 21. (Original) A peptide library, wherein each peptide therein comprises a nucleophilic functional group.
- 22. (Cancelled)
- 23. (Cancelled)
- 24. (Cancelled)
- 25. (Cancelled)
- 26. (Cancelled)

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- 27. (Cancelled)
- 28. (Previously Presented) A composition of matter comprising the peptide of claim 14, and a carrier.
- 29. (Cancelled)
- 30. (Previously Presented) The composition of claim 28, wherein the carrier is a foam or an aerosol.
- 31. (Original) An article of manufacture comprising the peptide of claim 14 affixed to a solid substrate.
- 32. (Cancelled)
- 33. (Cancelled)
- 34. (Original) The article of claim 31, wherein the solid substrate is a filtration component of a gas mask.
- 35. (Original) A method for reducing the likelihood of injury due to exposure to an organophosphorus agent in a subject exposed to or at risk of exposure to such agent, comprising administering to the subject an effective amount of the peptide of claim 14.
- 36. (Original) A method for decontaminating an area exposed to an organophosphorus agent comprising introducing to the area an effective amount of the peptide of claim 14.
- 37. (Cancelled)
- 38. (Cancelled)